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ADMINISTRATIVE REPORT

Report Date: September 30, 2010
Contact: Amy Sidwell
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RTS No.: 08910
VanRIMS No.: 08-2000-20
Meeting Date: November 2, 2010

TO: Vancouver City Council

FROM: Chief Constable and General Manager of Engineering Services

SUBJECT: Vancouver Police Department - Beach Patrol Program Vehicle Requirements

RECOMMENDATION

- A. THAT Council approve the addition of three (3) all-terrain vehicles to the Vancouver Police Department fleet at a total cost of \$27,000;

FURTHER THAT Council approve funding of the initial vehicle purchases and the 2010 operating costs by an acceptance of a donation of \$34,687 from the Vancouver Police Foundation;

AND FURTHER THAT Council approve the allocation of \$27,000 from the Truck and Equipment Plant Account for the purchase of replacement units.

- B. THAT the annual capital and operating costs of the vehicles be repaid to the Truck and Equipment Plant Account through annual charges of \$16,500 (reduced to \$10,200 by the donation), funding to be provided by an increase to the Vancouver Police Department Operating Budget in 2012 without offset, subject to annual budget review. The 2011 annual capital and operating costs will be funded using Vancouver Police Department 2011 Operating Budget.

COUNCIL POLICY

Council approves expenditures from Reserves, including the Truck and Equipment Plant Account.

Council approves all increases in service levels, including the addition of vehicles and equipment to the fleet.

PURPOSE

The purpose of this report is to seek Council approval to add three (3) all-terrain vehicles (ATVs) to the Vancouver Police Department (VPD) fleet.

BACKGROUND

In the summer of 2003, in response to increasing levels of violent crime and disorder issues, the VPD initiated a dedicated Beach Patrol program to establish and maintain a strong visible police presence on the beaches in District Four (D4). Beach Patrol is a dedicated policing program that deploys officers on horses, bikes, boats, and ATVs. The Beach Patrol program's primary geographic responsibility is Vancouver's West Side beaches, with ATVs deployed only on Patrol District four (D4) beach areas, from Science World at the east to the University Endowment lands at the west. The deployment of ATVs, as well as bike patrol, was implemented as part of the Beach Patrol program as an innovative method of patrolling areas not normally accessible by traditional patrol vehicles. The Beach Patrol program was considered a success in its first year therefore VPD repeated the program in 2004. However, the program could not continue as a permanent initiative due to a lack of manpower and resources due to a large number of unanticipated retirements. As a result, the program was not implemented again until 2007, following criticism in the fall of 2006 resulting from an increase in public disorder on Vancouver's beaches.

The Beach Patrol program provides a visible and proactive police enforcement initiative to maintain order on Vancouver's beaches. The Beach Patrol program not only increases public safety through regular patrol, they educate the public on issues such as fires, parking and public drinking of liquor. As well, Beach Patrol can respond to calls for service on and around the beaches which frees regular patrol members to respond to calls in D4. The Beach Patrol program also liaises with the Vancouver Park Board to assist with any related matters on the beaches and surrounding areas.

The City's 2010-2020 Corporate Strategic Business Plan includes a goal (Goal 8.D) of "ensuring Vancouver's streets, parks, beaches and public spaces are safe, pleasant and welcoming for everyone". The VPD's Beach Patrol program, which has operated in five (5) of the last eight (8) years, greatly contributes to achieving this strategic goal on the expanses of public beaches and adjacent land in the D4 patrol area.

The Beach Patrol program is supported by the Vancouver Park Board. Having a mobile patrol unit in place on D4 beaches increases the safety of visitors to the beaches, which in turn increases the accessibility of the beaches. Additionally, the Beach Patrol program has made a safer work environment for the Park Board staff that maintains and operates the beaches in D4.

DISCUSSION

a) Operational Challenges of Patrolling on D4 Beaches

The beaches in D4 represent a policing challenge as the terrain varies greatly from smooth asphalt to uneven grass, loose gravel and sand. As such the area is not easily accessible by traditional patrol vehicles, and the sandy terrain makes bicycle patrolling difficult.

Additionally, the D4 beaches span a very large area, from Science World at the east to the University Endowment lands at the west; therefore foot patrol is not practical as the time to respond to calls is greatly increased. With the exception of 2009, the Beach Patrol program has utilized ATVs in order to address the patrolling challenges of the D4 beaches. These were acquired as either short term donations or leases. The ATVs are able to maneuver easily on varied terrain, including sand, and as such they have greatly assisted officers in effectively and proactively patrolling and responding to incidents on the D4 beaches.

b) Operational Evaluation of Beach Patrol Program and Use of ATVs

Throughout the summer of 2010 the VPD conducted an evaluation of the effectiveness of the Beach Patrol program and its use of the ATVs. The VPD's final report on the evaluation is posted on the VPD website at <http://vancouver.ca/police/assets/pdf/reports-policies/vpd-beach-patrol-report.pdf>.

Operationally, the evaluation concluded that the ATVs had a positive impact in a number of performance areas such as reducing citizen generated calls, alcohol related incidents, and reported assaults. The benefits of the program, and the use of the ATVs, were demonstrated through an evaluation of how often Beach Patrol officers proactively discovered public disorder and criminal incidents, responded to them, and thus prevented them from escalating into more serious incidents.

In 2008 the Beach Patrol program used ATVs and the VPD received 141 citizen-generated calls for service compared to 399 police officer-discovered incidents; however, in 2009 (when ATVs were not used) there were 196 citizen-generated calls for service (a 39% increase) compared to only 258 officer-discovered calls (a 35% decrease). This trend reversed itself in 2010 when the ATVs were re-deployed: 146 citizen-generated calls (a 26% decrease) compared to 317 officer-discovered incidents (a 23% increase).

Consumption of alcohol on the beaches is a primary concern for the VPD and reducing alcohol-related incidents is one of the program's proactive goals. Again, the results demonstrated an increase in operational effectiveness with ATVs: in 2008 (with ATVs) there were 233 alcohol-related incidents; in 2009 (no ATVs) there were 111 (a decrease of 52%) and in 2010 (with ATVs) there were 179 (an increase of 61%). It is worth noting that in 2010 Beach Patrol officers conducted 7,129 pour-outs of alcohol on the beaches (an average of 72 per day from June 1 - to Sept. 7).

Lastly, the number of reported assaults also improved with the use of ATVs. The numbers are low to begin with but the trend is consistent: in 2008 (with ATVs) there was 1 assault, in 2009 (no ATVs) there were 8 and in 2010 (with ATVs) there were 4.

The VPD concluded that the use of the ATVs greatly facilitated police officer mobility and therefore enhanced their proactive capabilities. It was therefore recommended, from the perspective of public safety and crime prevention, that police officers utilize ATVs so that they can encounter and respond to incidents on the beach before they escalate into more serious matters that would compel a citizen to call for police service.

c) Public & Park Board Staff Opinion Survey

In addition to the operational evaluation described above, this summer the VPD published a survey to assess citizen and Park Board Staff perceptions of safety on the beaches along with their opinion of the Beach Patrol program and the use of the ATVs. The following summarizes the main findings:

- 950 people responded to the survey: 44% feel that the beaches are safer this year compared to previous years, while 35% felt it was unchanged. 68% of all respondents support the continuation of the program.
- 478 of the respondents live in postal codes neighbouring the beaches and 74% of them support the Beach Patrol in general.
- 65 Parks Board employees completed the survey and 68% of them felt the beaches were safer this year than in previous years, while about 22% felt it was unchanged. 91% were in favour of the Beach Patrol Program.
- 73% of all respondents and 68% of Parks employees agreed that the ATVs make police more visible on the beach.
- 54% of all respondents and 68% of Parks employees agreed the ATVs allow police to respond to incidents on the beach more quickly than other types of patrol.
- 51% of the general survey respondents and 45% of Parks employees agreed that the ATVs were noisy.
- Of the 950 general survey respondents, 385 provided feedback in the form of comments. Of these 385 comments, 38% were supportive of the ATVs while 62% were not supportive. Of those that were not supportive, the following are the top 3 reasons given: ATVs are disruptive, polluting, and aggressive; tax dollars should be spent on more important issues; other types of patrols are preferred (i.e. foot, bike, Mounted Unit).

The VPD evaluation report provides examples of comments provided by citizens on the survey that are both supportive and non-supportive of the use of the ATVs. A compelling comment in favour of the ATVs was provided by one respondent:

"I am disabled and for many years never went to see the fireworks. This year I felt very safe going to the beach because of the ATV patrolling the beach - we were at Spanish Banks. I do believe that the police patrolling the beaches kept it a very safe place for young and old to enjoy the event. Thank you for the opportunity to express my opinion."

The public's concerns about noise and pollution impacts on the environment are important factors that have been addressed in the Environmental Implications section of this report. The VPD commits to working with Equipment Services to evaluate technologies that will further reduce the environmental impacts of the ATV fleet without sacrificing operational effectiveness.

b) Utilization Rate

The Beach Patrol unit utilizes the ATVs during the peak summer months from May to September, deploying seven (7) days per week, typically leading up to, during, and following peak visiting hours at D4 beaches. In addition to utilization for the Beach Patrol, VPD requires

the ATVs to supplement other operational and incident responses (e.g. large-scale searches, patrols in Stanley Park, etc.) on an infrequent basis. The total estimated annual usage of the three (3) ATVs is expected to be approximately 7,400 kms, with 90% of that utilization coming from Beach Patrol usage and 10% coming from supplementary responses.

c) Developing Practices by Other Agencies

A best practice among police agencies in North America is to equip Beach Patrol units with ATVs. Los Angeles, Long Beach, Miami, Myrtle Beach, and Honolulu all utilize ATVs to patrol beaches. The VPD's Beach Patrol unit has identified these types of vehicles as a desired solution to its mobility requirements.

d) Donation Opportunity

The Vancouver Police Foundation has raised \$34,687 to put towards the initial purchase and 2010 operating costs of the ATVs. Though this funding is available, the VPD Management Process Flowchart for Vehicle and Equipment Additions (City & Donated) that is outlined in Appendix A, requires that donated vehicles only be accepted if need can be demonstrated. Only if Council approves the addition of the ATVs to the VPD fleet will this donation be accepted.

FINANCIAL IMPLICATIONS

ATVs provide the best technical solution to meet the VPD's mobility requirements on D4 beaches. The vehicles, therefore, are being recommended as additions to the VPD fleet on the basis of technical fit and the availability of an outside donation to offset the needed capital contribution.

The ATVs are being recommended for purchase as opposed to leasing as the overall budgetary requirements to lease the ATVs was found to be more expensive than purchasing City-owned units, \$21,300 lease vs. \$16,500 City-owned. Purchasing City-owned units will therefore result in annual savings of \$4,800 over leasing. Additionally, the VPD will be able to utilize these units for other events when they are not in use by the Beach Patrol.

The one-time capital costs and operating budget requirements for the units are listed in Table 1 below.

Table 1. Capital and operating costs of three (3) ATV units.

Vehicle Description	One-Time Capital Costs	Annual Operating Budget Requirements		
		Capital	Operating	Subtotal
ATV	\$27,000	\$6,300	\$10,200	\$16,500

The estimated capital cost for the three (3) ATVs is \$27,000. The Vancouver Police Foundation has donated \$34,687 to fund the initial purchase. This amount is greater than the estimated capital requirement; therefore the remaining \$7,687 in donated funds will be applied to the 2010 operating costs of the three (3) units. The donation was made in accordance with the VPD Management Process Flowchart for Vehicle and Equipment Additions (City & Donated)

that was approved by Council on November 6, 2007 (RTS No. 06433). This process is outlined in Appendix A.

The total annual operating budget requirement for three (3) ATV units is estimated to be \$16,500 and includes capital, maintenance, fuel and insurance. As the Vancouver Police Foundation donation will fully fund the initial capital costs of the ATVs, the \$6,300 in annual capital charges will be eliminated until the units are replaced at the end of their 5 year economic life. Therefore for the first 5 years the VPD will only be responsible for the remaining \$10,200 in annual operating costs. This will be funded by an increase to the VPD Operating Budget in 2012 without offset, subject to annual budget review. VPD will fund the 2011 annual operating costs of the units using 2011 Operating Budget.

If no donation is received for future vehicle purchases capital funding for the replacement vehicles will be provided for from the Truck and Equipment Plant Account and will be repaid over the economic lives of the units through annual capital rates as described above. The full operating budget, including capital, maintenance, fuel and insurance will therefore be required as outlined above, subject to annual budget review.

ENVIRONMENTAL IMPLICATIONS

As part of the City of Vancouver's goal to be the greenest city in the world by 2020 the VPD and Equipment Services go through an environmental and right-sizing review process for all new and replacement equipment in the VPD fleet. This is to ensure that the equipment will meet the user's operational needs and that the selected equipment has the best combination of fuel efficiency and cost effectiveness.

To meet the operational requirements of the Beach Patrol unit the ATVs require an approximate 25 horsepower engine, off-road capability, average 41 km range per shift, and 180 kgs in payload capacity.

There are currently gasoline powered ATV units that meet the operational needs listed above, and that meet the current US Environmental Protection Agency emissions standards for models 2006 or later. Gasoline models have been used in each year that ATVs were operated by the Beach Patrol program and in all cases the gasoline models met the operational requirements.

Electric ATV models are also available but it is uncertain that these will meet the range requirements of the VPD. As stated above, the average range required per unit per shift is 41 kms. A number of electric ATV models have a maximum range of 40 kms, which is very close to meeting VPD requirements, but generally maximum range values are specified for ideal operating conditions (i.e. operated on a level, smooth surface at a constant speed, with minimal payload). It is therefore expected that the maximum range of an electric ATV when operated in a Beach Patrol application, with varied terrain, speed and payload requirements, would be less than the manufacturer's maximum. As such, purchasing electric ATVs is not recommended at this time as it is uncertain whether electric models will meet VPD operational requirements; however a future plan to operationally evaluate electric models in a Beach Patrol application is discussed below.

The sound production of the each ATV was measured according to SAE standard J2825, which establishes measurement techniques and sound level limits for on-highway motorcycles. The average sound production of the ATVs at idle and high rpm was found to be 79.4 dB and 92.6 dB, respectively. Both of these values are below the recommended threshold limits of 96 dB and 100 dB, respectively.

The VPD is committed to exploring solutions to further reduce the noise and pollution impacts on the environment of current and future replacement ATVs. In 2011 the VPD will work with Equipment Services to lease an electric ATV to assess operational feasibility and noise impacts in the Beach Patrol application. Additionally they will evaluate after-market sound reduction technologies to reduce the noise impacts of gasoline powered ATVs. These evaluations will attempt to address the public's concerns about the noise and pollution impacts on the environment. These evaluations will be funded using VPD operating budget.

The total annual CO₂ production of three (3) gasoline powered ATVs based on the expected utilization, is 1.9 metric tonnes. Since the Beach Patrol unit is staffed by officers from D4, using the ATVs means that patrol vehicle usage is reduced in D4 during the times the ATVs are deployed. The total annual patrol vehicle CO₂ production that is mitigated as a result of using the ATVs is estimated to be 2.2 metric tonnes. Thus the use of ATVs reduces the VPD's overall carbon emissions by 0.3 metric tonnes per year.

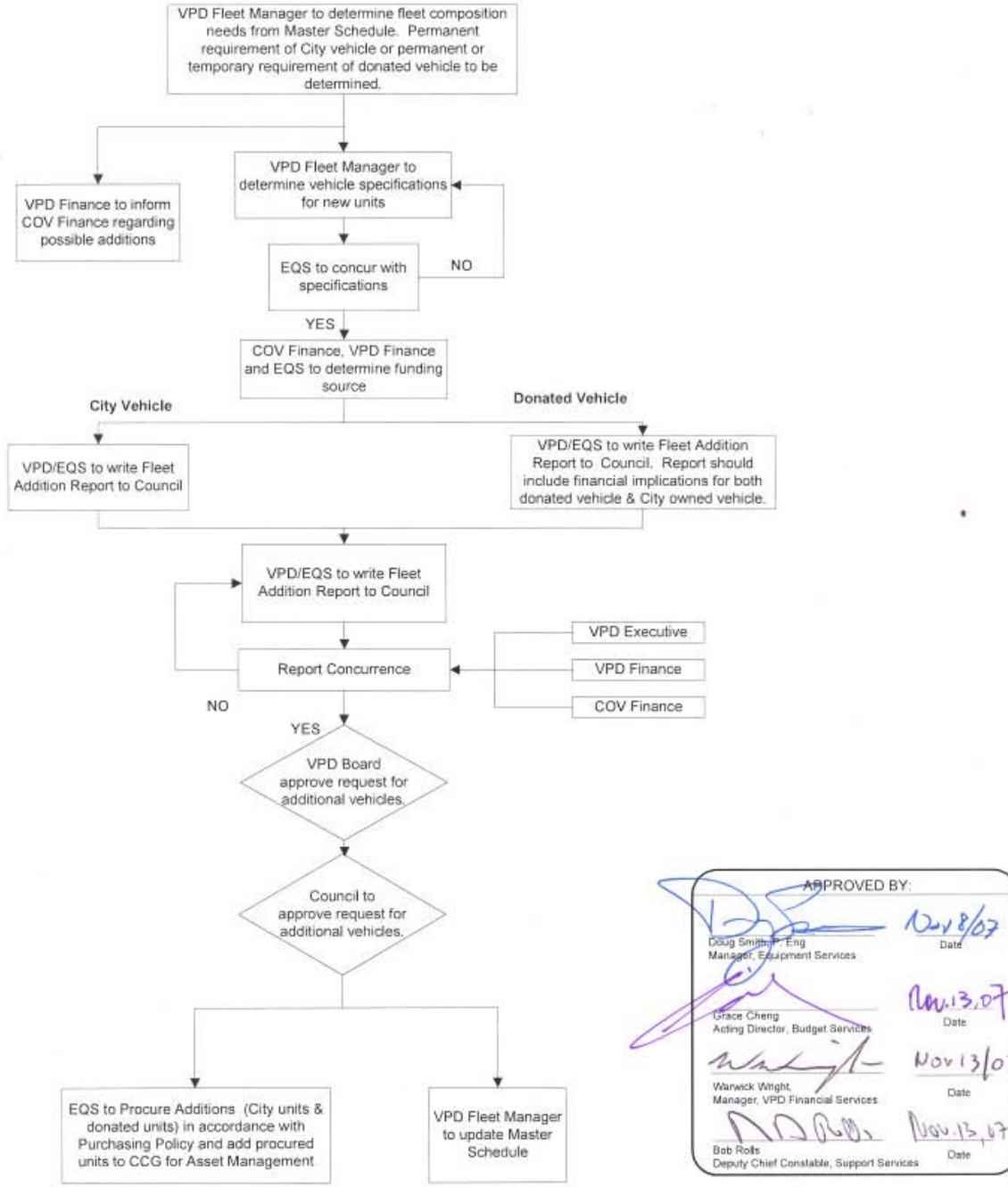
CONCLUSION

To help ensure that the Vancouver public beaches and adjacent land in D4 are safe, pleasant and welcoming for everyone three (3) ATVs are required to be added to the VPD fleet to increase the mobility of Beach Patrol members. The addition of these vehicles to the VPD fleet would require a funding allocation of \$27,000 from the Truck and Equipment Plant account. The Vancouver Police Foundation has agreed to donate the capital funds and 2010 operating costs for the first vehicles purchased. If approved, replacement vehicles will be funded from the Truck and Equipment Plant account. The total annual capital and operating costs will be paid for by a \$16,500 (reduced to \$10,200 for donated units) increase to the VPD Operating Budget starting in 2012, subject to annual budget review.

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APPENDIX A: VEHICLE AND EQUIPMENT ADDITION PROCESS (CITY & DONATED)

Vehicle and Equipment Additions (City & Donated)
Joint Police Fleet Review



APPROVED BY:

	Nov 8/07
Doug Smith, Eng Manager, Equipment Services	Date
	Nov 13, 07
Grace Cheng, Acting Director, Budget Services	Date
	Nov 13/07
Warwick Wright, Manager, VPD Financial Services	Date
	Nov 13, 07
Bob Rols, Deputy Chief Constable, Support Services	Date

DISPUTE RESOLUTION: Disagreements in respect to process will be addressed by the Assistant City Engineer of Departmental Services and the Deputy Chief Constable of Support Services.